

## **REMARKS**

Claims 1-67 remain pending in the Application. Claims 1-27, 29-41, 43-47 and 49-67 stand rejected by the Examiner. Claims 28, 42 and 48 are objected to. Claims 1, 8, 31, 45, and 46 have been amended herein. Claims 68-77 have been added. Applicants traverse the rejections of claims 1-27, 29-41, 43-47 and 49-67.

### ***Allowable Subject Matter***

Applicants sincerely thank the examiner for indicating that claims 28, 42 and 48 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Applicants respectfully submit that new claims 76 and 77 recite subject matter deemed allowable by the examiner.

### ***Examiner's Interview***

Patentee's representative would like to thank Examiner Goddard for the courtesies extended to patentee's representative, John V. Biernacki, during the telephone interviews on May 18, 2004. During the interview, the cited references Simoudis (USPN 5,692,107) and Myers (USPN 5,832,450) were discussed in view of claim 1's recitation of handling predictive data models. The interview also discussed the current office action's note on page 27 related to the term "predictive data model" and the example of a decision tree to illustrate a predictive data model. The remarks and amendments contained herein further summarize the interview.

### ***Claim Rejections - 35 U.S.C. § 103***

Claim 1 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,692,107 to Simoudis et al. (“Simoudis”) in view of U.S. Patent No. 5,832,450 to Myers et al. (“Myers”). This rejection is traversed.

Claim 1 recites in combination with its other limitations that a “model repository includes one or more index structures containing a plurality of attributes associated with the data models.” Claim 1 further recites that the “the data models are predictive data models.” A predictive data model can use a variety of pattern-finding algorithms (e.g., decision tree algorithms, neural networks, etc.) in order to identify patterns in data sets. These patterns can then be used by people, such as a business analyst, to make business recommendations.

The Office Action maintains on page 3 that “Myers teaches indexing a computerized repository by the attributes associated with its stored data models in order to provide meaningful retrieval of the models. See column 6, lines 14-29 for this disclosure.” Applicants respectfully disagree. Myers is addressing in column 6 and throughout its disclosure a different type of data model from what is recited in Applicants’ claim 1. Myers discloses a data model that is in Myers’ own words, “a database model” (see column 6, lines 14-15; lines 18-19), and more specifically an “object-oriented database model” (see *Id.*). A database model is a type of model that specifies what the structure of a database should be. It is the actor/agent for determining the structure of a database in which objects and data are to be stored. Myers illustrates that its type of data model is concerned with specifying the structure of a database, such

as whether the database should be normalized: Myers' "object-oriented data model avoids normalizing" (see column 6, line 25; emphasis added).

Applicants' claim 1 defines over this different type of data model of Myers (i.e., the database model) by reciting that its data model is a "predictive data model" and more specifically and in combination with its other limitations, by reciting that its "predictive data models are the entities being indexed by the one or more index structures such that the attributes of the predictive data models are stored within the one or more indexes." Claim 1's predictive data model and its attributes are not the actor/agent of determining a database's structure (as Myers' database model is), but rather claim 1's predictive data model attributes are the entities actually being stored in the already determined index structures.

Because claim 1's recited subject matter is significantly different than what is disclosed, taught or suggested by Simoudis (whether viewed alone or in combination with Myers), claim 1 is allowable and its dependent claims as well.

With reference to independent claims 45 and 46, claims 45 and 46 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Simoudis in view of Myers. These rejections are traversed. Claims 45 and 46 recite in combination with their respective other limitations a predictive data model. As discussed above for claim 1, Myers (whether viewed alone or in combination with the other cited references) discloses a different type of data model than the predictive data models recited in claims 45 and 46 (i.e., predictive data models are the entities being indexed by the one or more index structures such that the attributes of the predictive data models are stored within the one

or more indexes). Accordingly, claims 45 and 46 and their respective dependent claims are allowable.

Applicants respectfully disagree with other positions in the Office Action. For example, claim 8 recites a search and retrieval graphical user interface for human users to manually search the index structures in the model repository and to retrieve one or more of the data models. Claim 8 further recites in combination with its other limitations “the graphical user interface is configured to allow a human operator to supply predictive data model attribute search parameters for searching against the attributes stored in the one or more index structures in order to retrieve a predictive data model for use and modification by the human user.”

The Office Action maintains on page 5 that “Simoudis’ search and retrieval interface (102, 105 & 105’) is a stand-alone graphical user interface (GUI) for manually searching the index structures in the model repository and for retrieving one or more of the data models as claimed.” Applicants respectfully disagree. The GUI 102 of Simoudis shields a human user from being able to directly access and use the predictive models. For example, GUI 102 of Simoudis “enables the user to generate the initial data mining request” (see column 3, lines 9-10). The initial data mining request allows a data mining technique to be performed upon target data. Also, a user can examine “each table in the schema through the user interface 102” (see column 6, lines 3-4). These example citations from Simoudis illustrate that GUI 102 of Simoudis does not allow a human user to supply predictive data model attribute search parameters in order to retrieve a predictive data model for use and modification by the human user (as recited by claim 8 in combination with claim 8’s other limitations).

Similarly, GUIs 105 and 105' in Simoudis do not allow a human user from being able to directly retrieve and use the predictive data models in the manner recited in claim 8. In Simoudis, GUIs 105 and 105' are interfaces specific to a data analysis module (e.g., GUIs 105 and 105' can act as interfaces to a case-based reasoning module 104 and a visualization module 104' as shown in figure 1 of Simoudis). As an example, "Module-specific parameters are set 205 using the GUI 105 of the selected data analysis module, which may be in the form of user queries or hypotheses." An example of a user query request provided by GUI 105 is provided by Simoudis at column 4, lines 62-64: "A query phase is a plain language query or request, such as "what is the return on investment for ...?". The natural language query phrase is then used in the execution of a data mining algorithm. As disclosed by Simoudis at column 6, lines 32-34, "an explanation 422 of these test results may be presented to the user through the interface 105." This exemplifies that the GUIs 105 and 105' do not allow a human user to search for, retrieve and use predictive data models for use by a human user, but instead in Simoudis, a human user provides basic input and receives results from execution of predictive data models that are handled by data analysis modules, which act as a user-friendly shield for the human user. Moreover, the interfaces in Simoudis do not let human users modify predictive data models that have been retrieved based upon user input search parameters.

The inability of a user to directly retrieve and use predictive data models is further shown in Simoudis at column 5, lines 54-58: "If modules 104 or data sources 114 are added to the system, the models may be retrieved from the knowledge repository 110 and applied or validated by those modules against new target data sets 108" (emphasis added). The modules themselves and not a human user directly access and use predictive

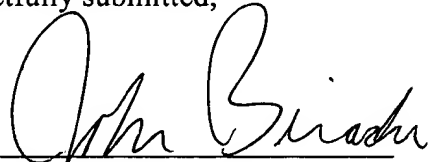
data models. This is significantly different than the subject matter recited in claim 8, and thus claim 8 is allowable.

### CONCLUSION

For the foregoing reasons, Applicants respectfully submit that claims 1- 67 as well as newly added claims 68-77 are allowable. Therefore, the Examiner is respectfully requested to pass this case to issue.

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